ULIS Block Diagram

Paul K. Dixon 6/7/01

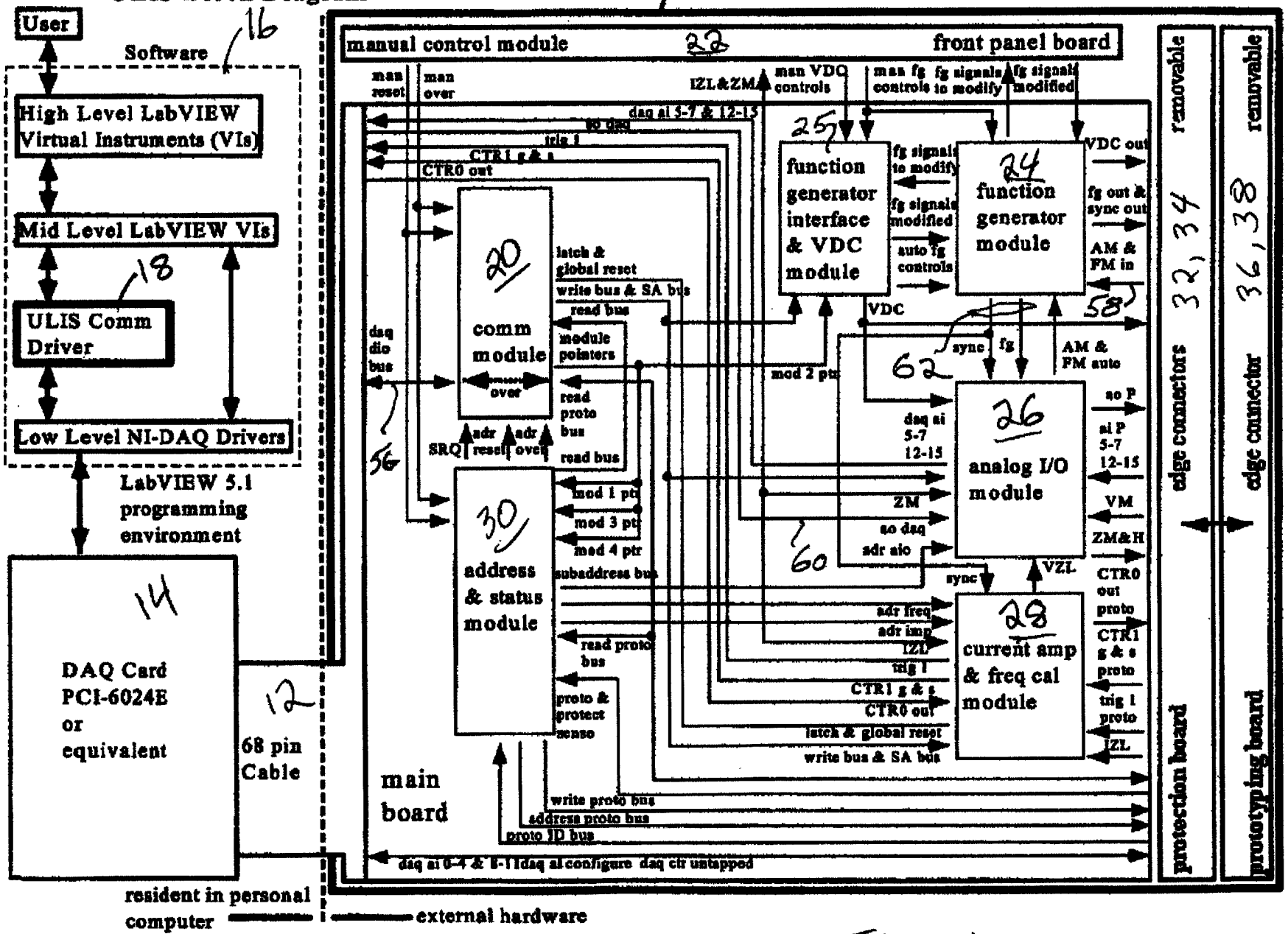


FIG. 1

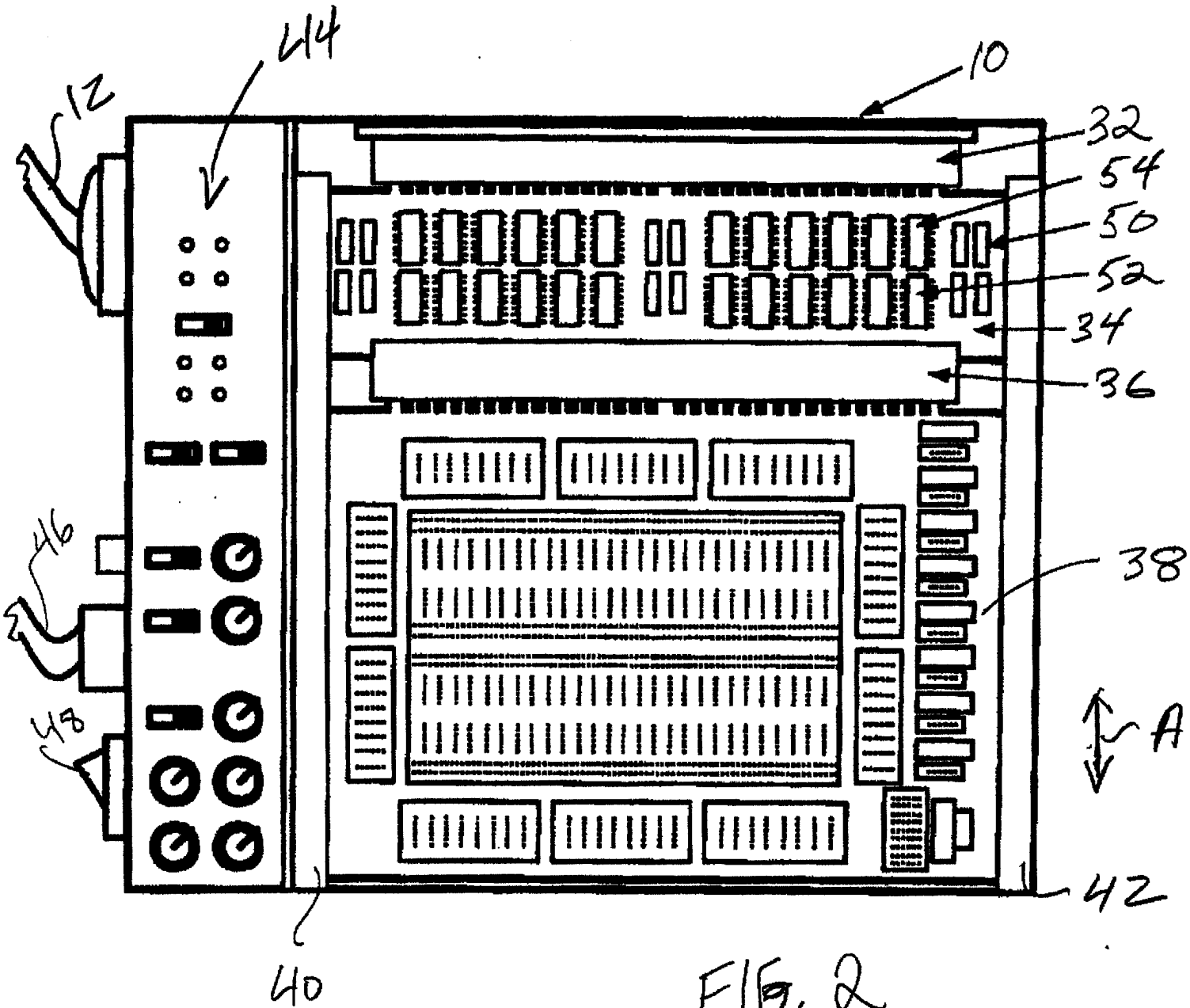


FIG. 2

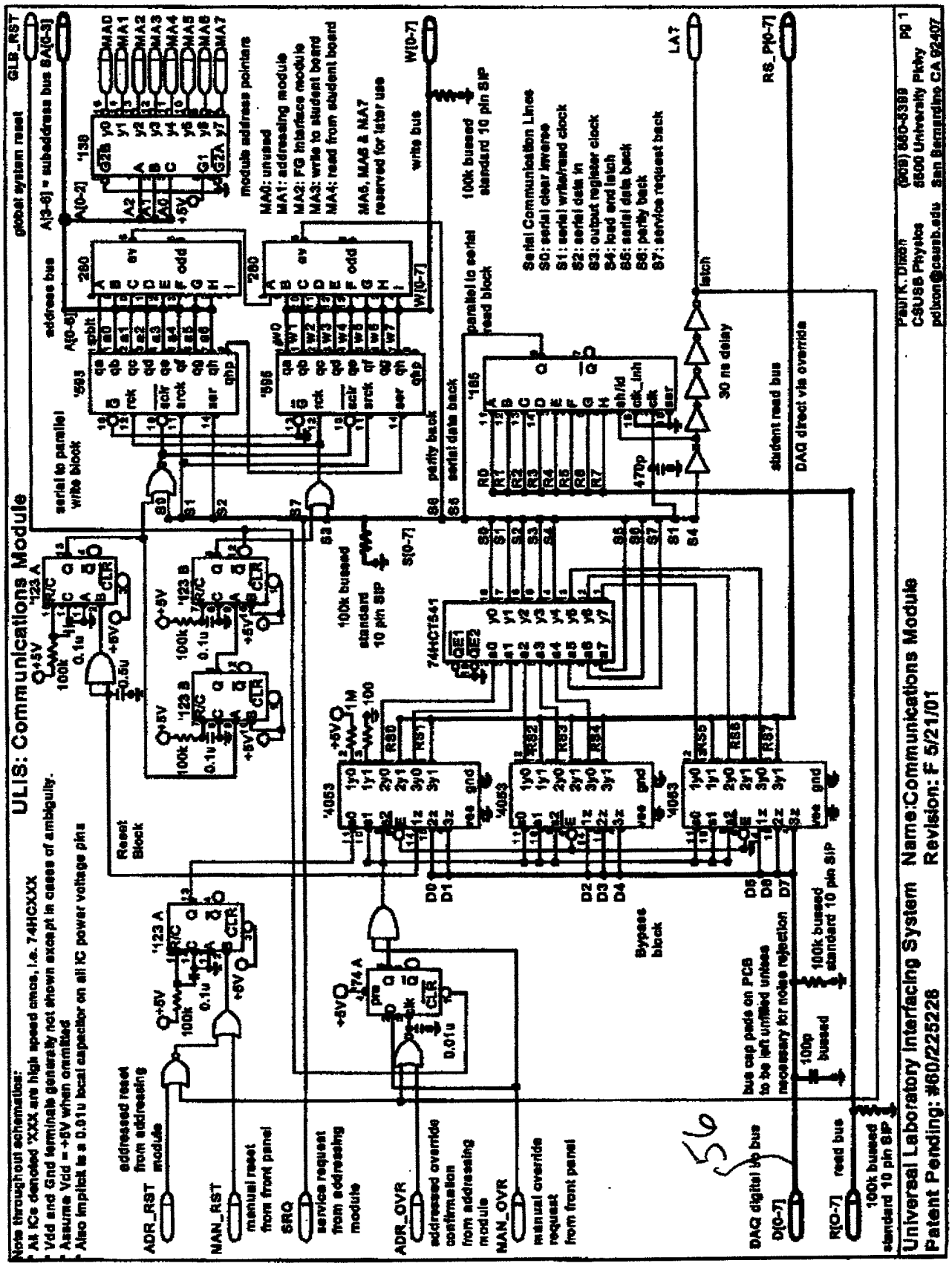
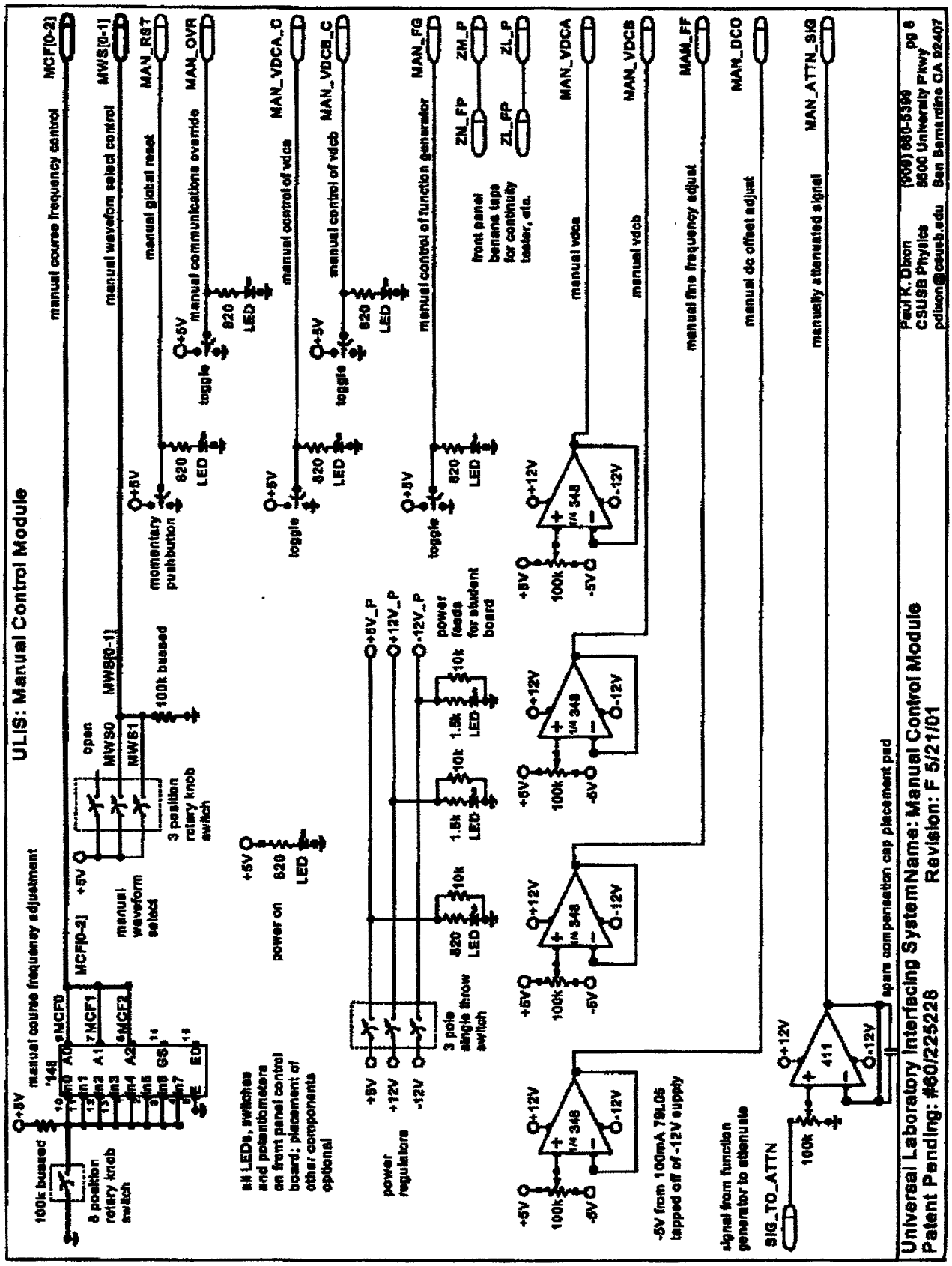


FIG. 3


ULIS: Manual Control Module
Universal Laboratory Interfacing System
Name: Manual Control Module
Patent Pending: #60/225228
Revision: F 5/21/01
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pg 6
manual course frequency control
manual waveform select control
manual global reset
manual communications override
manual control of vdca
manual control of vdcb
manual control of function generator
front panel banana taps for continuity tester, etc.
manual vdca
manual vdcb
manual fine frequency adjust
manual dc offset adjust
manually attenuated signal
MCF[0-2]
MWS[0-1]
MAN_RST
MAN_OVR
MAN_VDCA_C
MAN_VDCB_C
MAN_FG
ZM_P
ZL_P
ZM_FP
ZL_FP
MAN_VDCA
MAN_VDCB
MAN_FF
MAN_DCO
MAN_ATTN_SIG
100k bussed
8 position rotary knob switch
manual waveform select
3 position rotary knob switch
momentary pushbutton
toggle
820
LED
power on
all LEDs, switches and potentiometers on front panel control board; placement of other components optional
power regulators
3 pole single throw switch
power feeds for student board
1.5k
10k
100k
LM 348
LM 411
-5V from 100mA 79L05 tapped off of -12V supply
signal from function generator to attenuate
SIG_TO_ATTN
spare compensation cap placement pad

F16, 4

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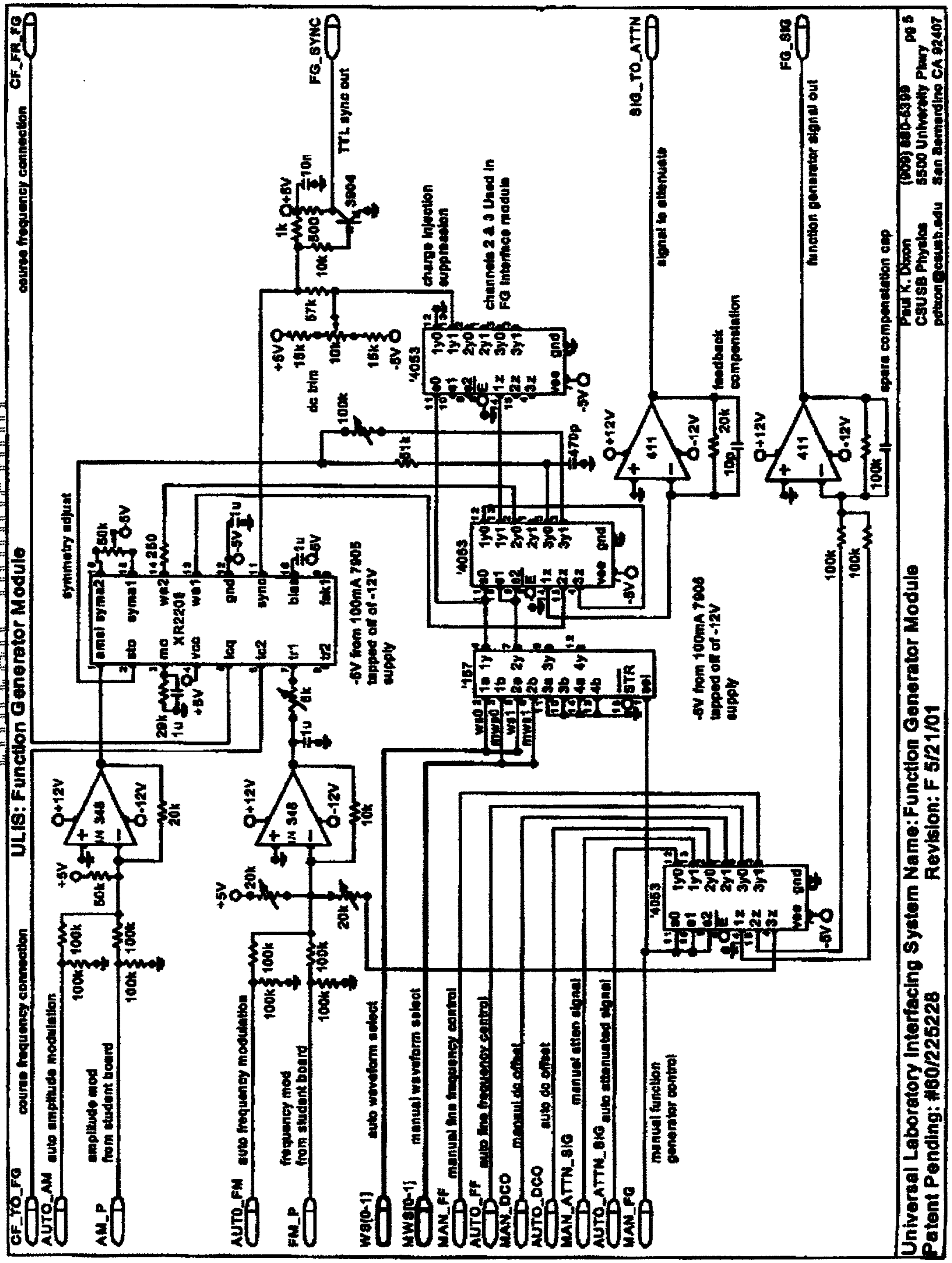

FIG. 5

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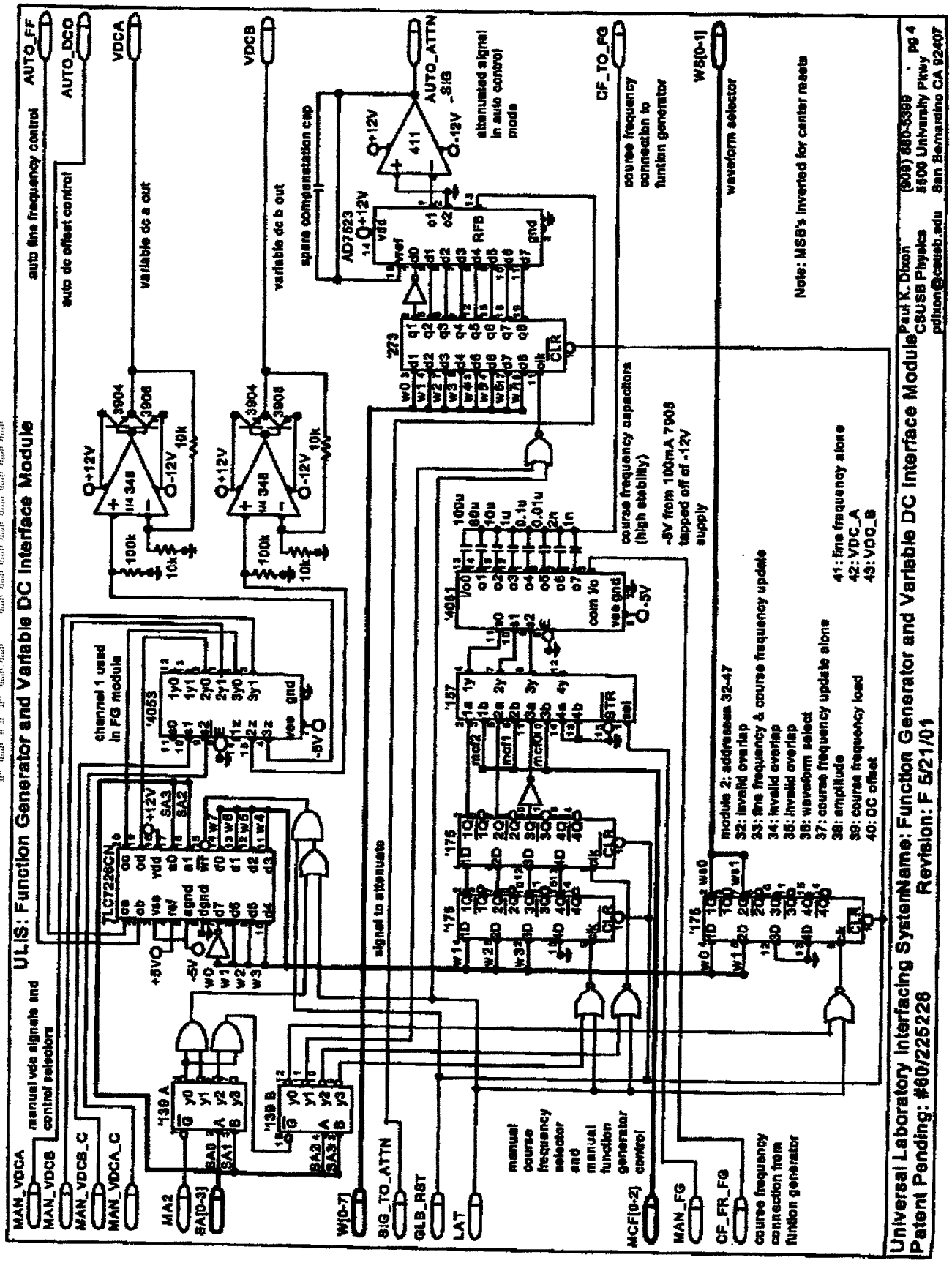
ULIS: Function Generator and Variable DC Interface Module
Universal Laboratory Interfacing SystemName: Function Generator and Variable DC Interface Module
Patent Pending: #60/225228
Revision: F 5/21/01
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AUTO_FF
AUTO_DCO
VDCA
VDCB
AUTO_ATTN
CF_TO_FG
WS[0-1]
auto fine frequency control
auto dc offset control
variable dc a out
variable dc b out
spare compensation cap
attenuated signal in auto control mode
course frequency connection to funtion generator
waveform selector
Note: MSB's inverted for center reads
course frequency capacitors (high stability)
-5V from 100mA 7905 tapped off of -12V supply
channel 1 used in FG module
signal to attenuate
module 2: addresses 32-47
32: invalid overlap
33: fine frequency & course frequency update
34: invalid overlap
35: invalid overlap
36: waveform select
37: course frequency update alone
38: amplitude
39: course frequency load
40: DC offset
41: fine frequency alone
42: VDC_A
43: VDC_B
MAN_VDCA
MAN_VDCB
MAN_VDCB_C
MAN_VDCA_C
manual vdc signals and control selectors
MA2
SA[0-3]
W[0-7]
BIG_TO_ATTN
GLB_RST
LAT
manual course frequency selector and manual function generator control
MCF[0-2]
MAN_FG
CF_FR_FG
course frequency connection from funtion generator

F16.6

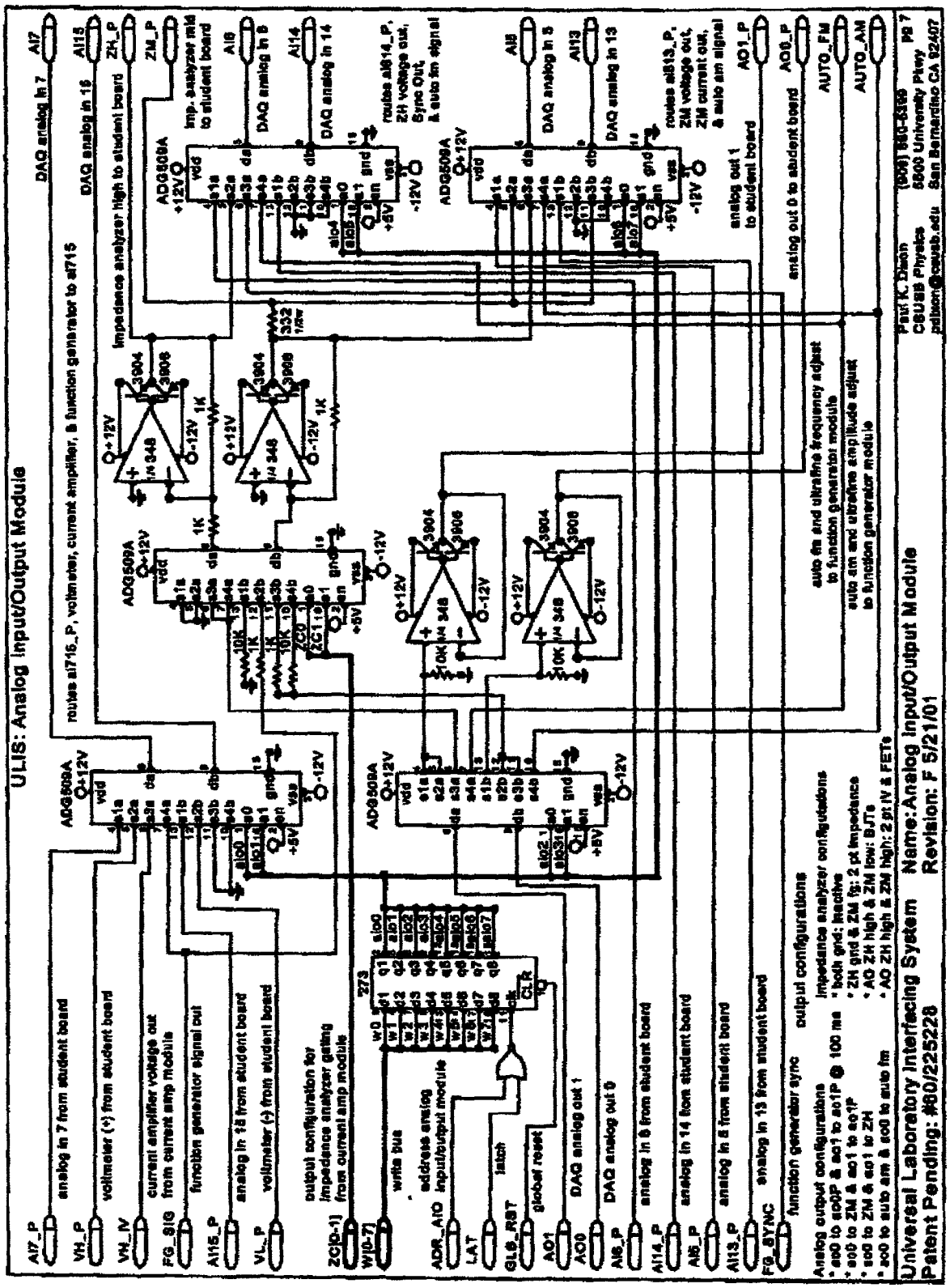

FIG 7

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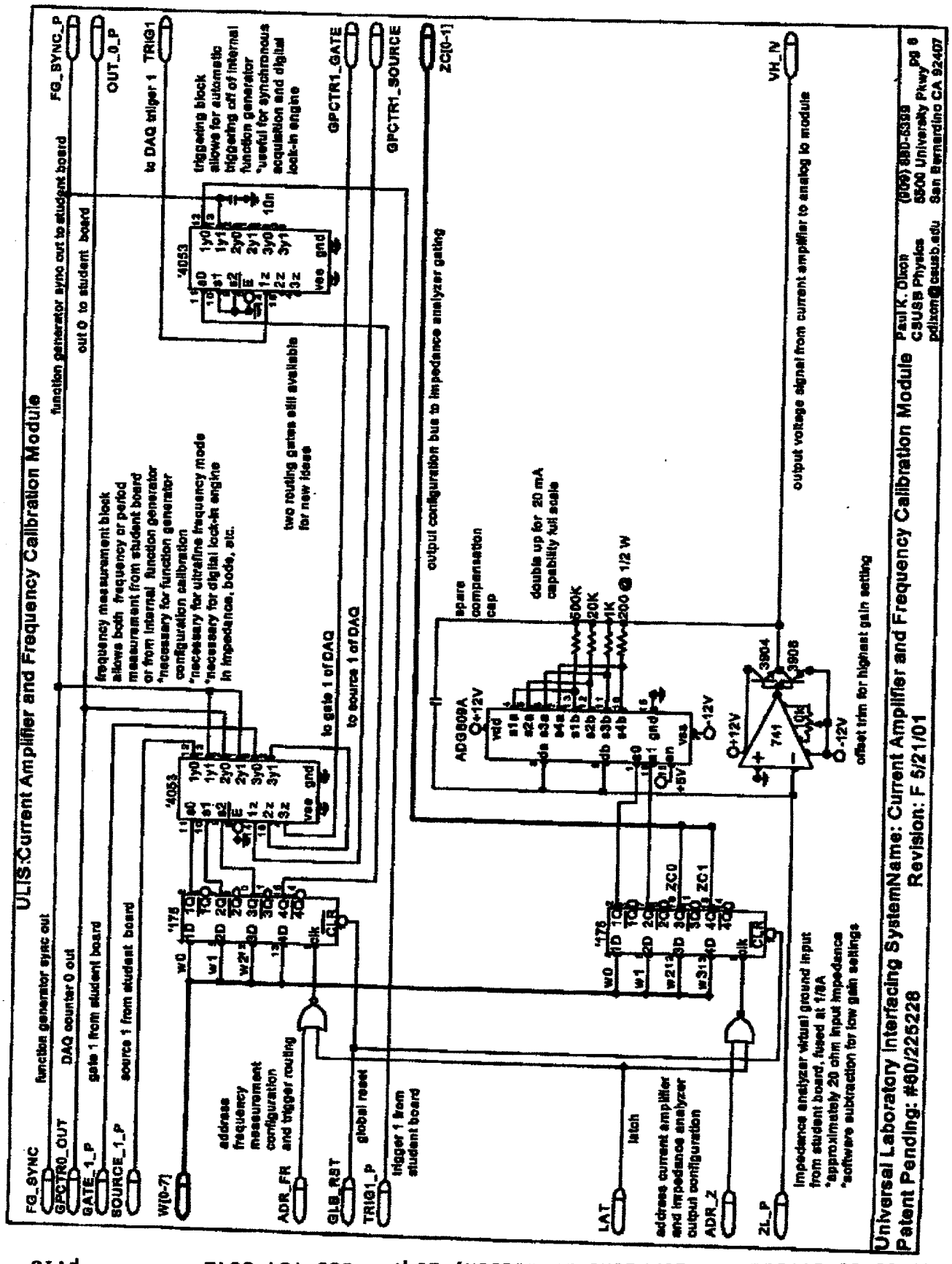

FIG 8

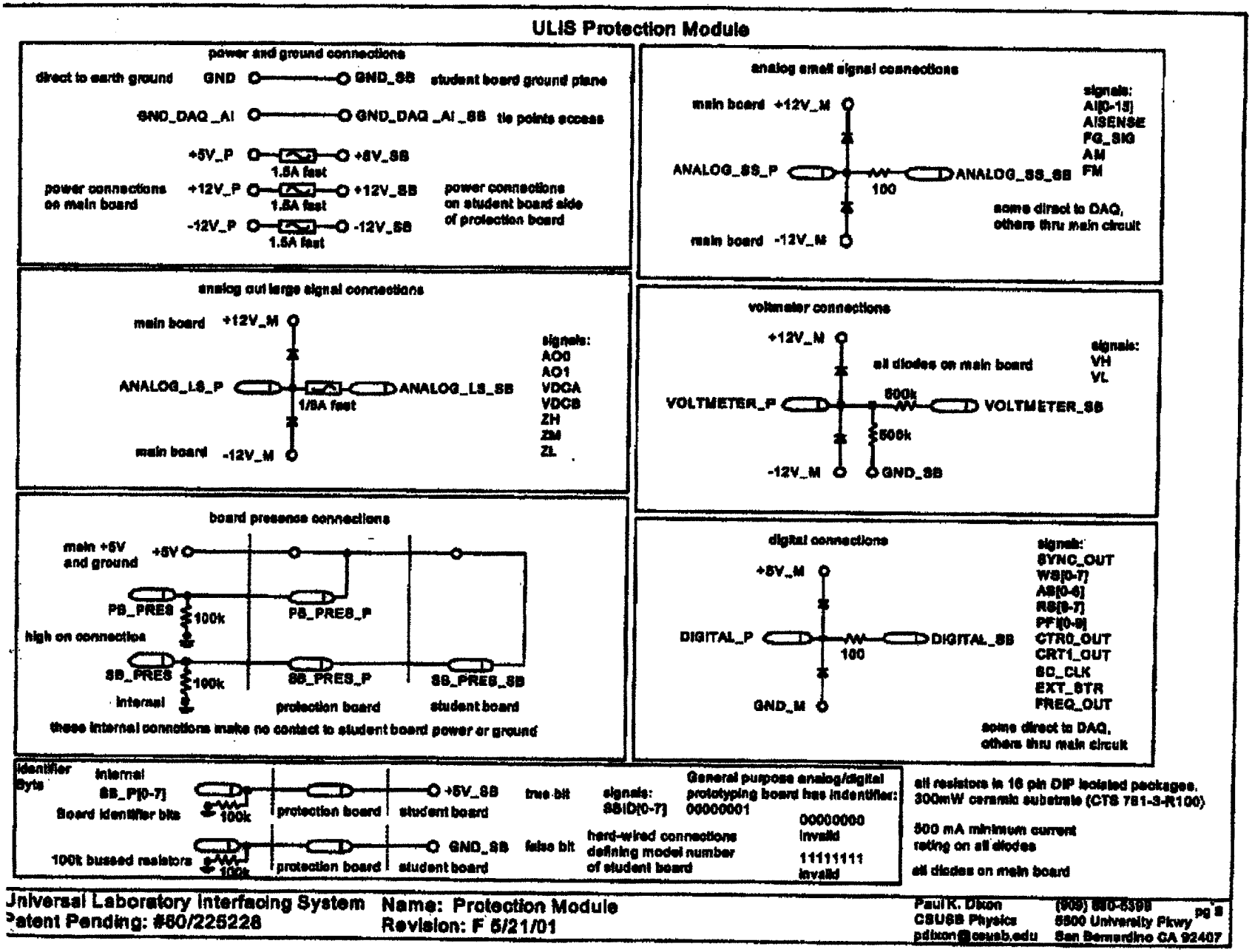

FIG. 9

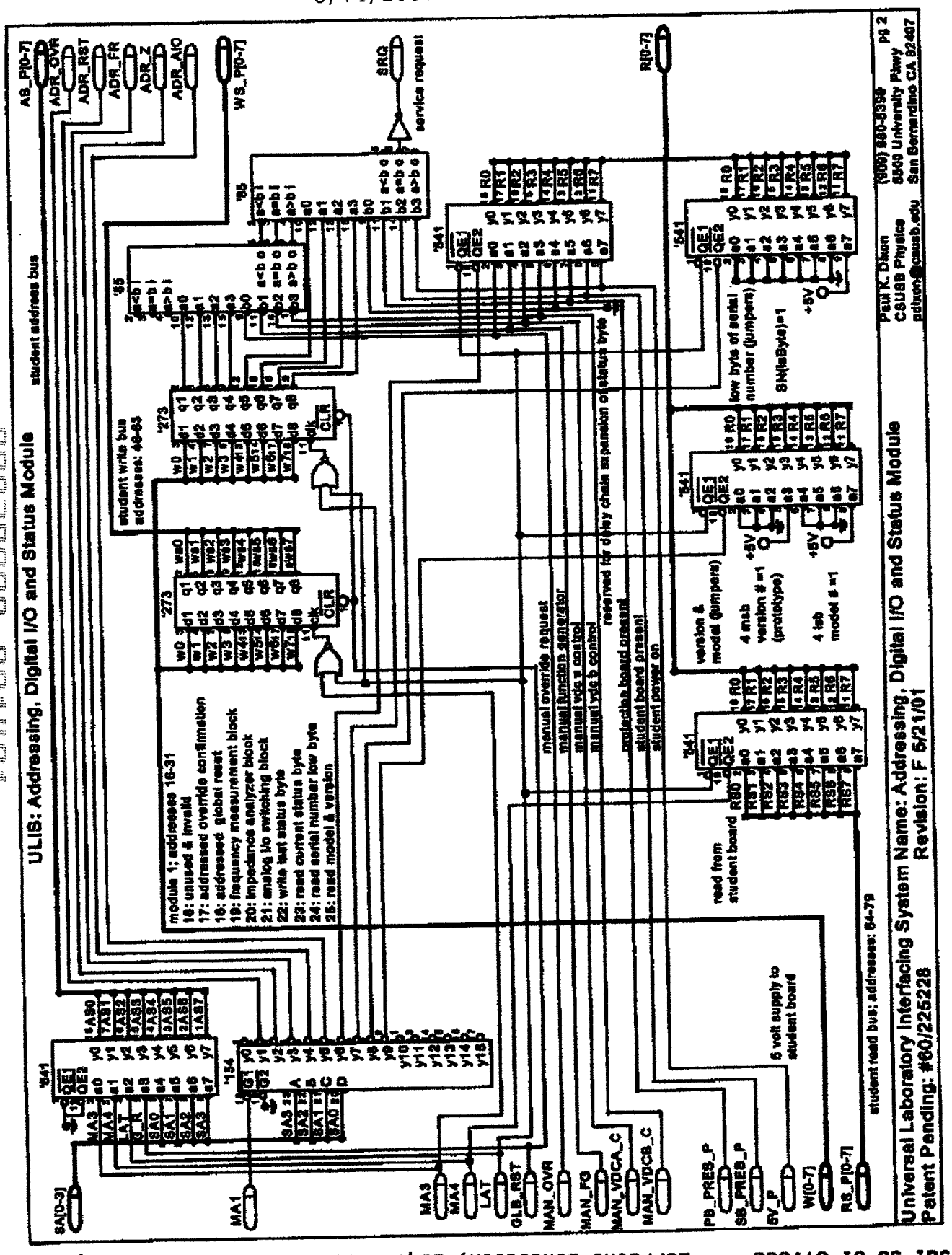

FIG. 10

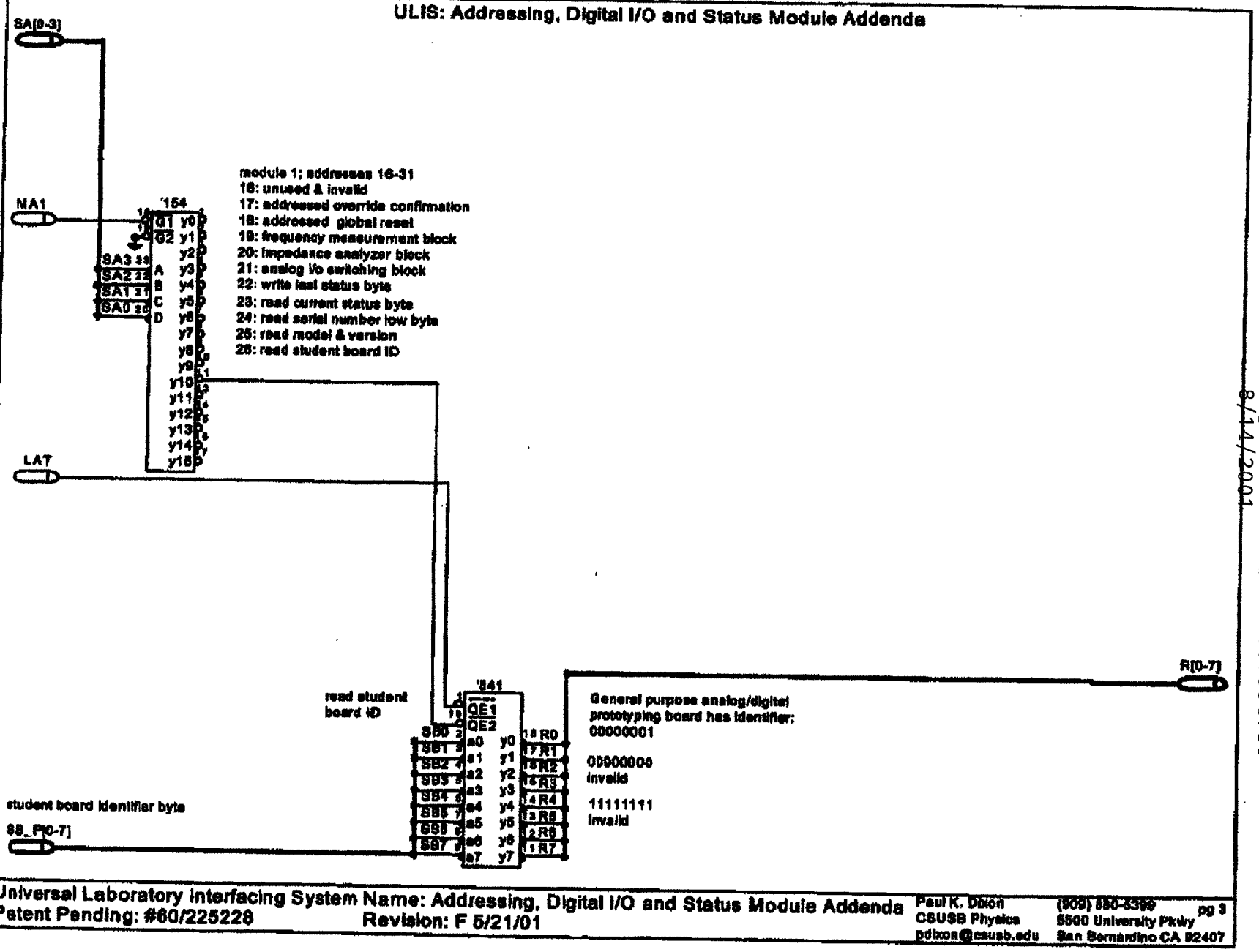

FIG. 11